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SOCIETY OF ARTS.

FRIDAY, DECEMBER 10th, 1852.

THIRD ORDINARY MEETING,

Wednesday, December 8th, 1852.

THE third ordinary meeting of the Society was held on Wednesday, the 8th inst., J. S. Russell, F.R.S., in the chair.

The following were elected members:

Adams, Robert, Falkirk.
Allen, The Venerable Archdeacon, Shrewsbury.
Anderson, Sir Charles H. J., Bart., Lea Hall, Gainsborough.
Ashworth, Joseph, Pendleton.
Aspinal, John, 261, High Holborn.
Atkinson, John S., Rochester.
Banes, George Dann, H. M. Dockyard, Chatham.
Bannister, Joseph, 63, Coleshill-street, Eaton-square.
Barker, Thomas Herbert, M.D., Bedford.
Bayliff, Rev. Thomas, Bishops Stortford.
Belfast, the Rt. Hon. the Earl of, 29, St. James's-street.
Bird, James, 16, Orchard-street, Portman-square.
Bloomfield, J. B., Poole, Dorset.
Brewer, W., M.D., 21, George-street, Hanover-square.
Buckley, Major-General, New Hall, Salisbury.
Burton, Alfred, 36, Marina, St. Leonard's.
Bushell, Frederick William, Basingstoke.
Cartwright, Peplow, Oswestry.
Chance, Robert Lucas, West Bromwich.
Challinor, William, Leek.
Chesson, F. W., Brompton, Chatham, Kent.
Chubb, W. T., Fordingbridge.
Clutton, Rev. Ralph, Saffron Walden.
Coleman, Alfred, Bridgfield, Wandsworth.
Cromartie, M. W.. Kensington.
Cunningham, James Mackey, M.D., Hailsham, Sussex.
Curwen, Rev. H., Workington.
Davis, Henry John, Newport, Monmouthshire.
Davis, Horatio, Mount Beacon House, Bath.
Denison, John Evelyn, M.P., 9, Stratton-street.
Dyson, Rev. H. J., Barking.
Fenton, Roger, 2, Albert-terrace, Albert-road, Regent's-park.
French, G. J., Bolton, Lancashire.
Gambier, Captain, Prince-town, Dartmoor.
Gill, Kennedy, Accrington.
Goddard, Samuel Palmer, Longton.
Harbin, George, Newton House, Yeovil.
Hawkes, Rev. Henry, B.A., F.L.S., Southsea.
Heys, Henry, Barrhead, near Glasgow.
Hitchin, James, Lincoln.
Hoffman, G. H., Margate.
Hope, Thomas Radford, Seaforth, near Liverpool.
Hutchison, Lieut. W., R.N., Saltash.
Hutson, Giles, Uxbridge.
Johnson, E. D., 21, Ashley-crescent, City-road.
Johnson, Henry, jun., Staleybridge.
Lacey, H. C., Richmond, Surrey.
Lloyd, Theodore, Leipsic-road, Camberwell.
Lucey, W. W., Marlborough.
Mackie, Samuel James, Folkstone.
Mason, A. J., 46, Argyle-square, New-road.
Miles, Philip W. S., Kingsweston, Bristol.
Montefiore, Nathaniel, 4, Great Stanhope-street.
Montgomery, James, Brentford.
Morris, David, M.P., 8, St. James-place.
Morrison, James, Commercial Bank, Stirling.
Ninnis, Paul, Walworth.
Norway, William King, Falmouth.
Overbury, Rev. F., Pershore.
Overton, Timothy, Horncastle.
Owen, Rev. Joseph Butterworth, Bilston.
Packe, C. W., M.P., 7, Richmond-terrace, Whitehall,
Panton, James, Wareham.
Parry, Thomas, Sleaford.
Patten, John Willson, M.P., 24, Hill-street.
Pickstone, William, Radcliffe-bridge, Lancashire.
Platt, James, Hartford Iron-works, Oldham.
Purvis, Prior, M.D. Greenwich.
Roberts, Henry, Jamaica.
Roche, James, Cork.
Rowe, R. R., Cambridge.
Sanctuary, Thomas, Horsham.
Scoones, Major Edward, Tunbridge.
Scott, Michael, Great George-street, Westminster.
Sharpe, Edmund, Lancaster.
Sillifant, John, Coombe, near Crediton.
Simpson, Rev. Robert, Skerton Parsonage, near Lancaster.
Smith, H. L., Southam.
Smith, John, Malton.
Smith, Rev. J. H., Leamington.
Smith, Thomas Cooper, 1, Cushion-court, Old Broad-street.
Smith, W. Wyke, Barnet.
Smithies, Joseph L., 4, Walbrook.
Sparkes, William, Crewkerne.
Spurrel, Flaxman, Bexley-heath.
Stephens, Henry, 34, Stamford-street.
Storey, Thomas, Lancaster.
Strickland, Hugh E., Tewkesbury.
Strong, Rev. W., Peterborough.
Swindells, George, Bollington, near Macclesfield.
Talfourd, the Hon. Sir T. N., 67, Russell-square.
Tartt, William M., Cheltenham.
Tait, Robert, 5, Queen Anne-street.
Thomson, Henry, Clitheroe.
Trent, E. W., Old Ford
Wales, the Rev. Chancellor, Northampton.

And the names of fifteen candidates for membership were read.

A paper by R. D. Hay, Esq., of Edinburgh, was read, on "the Geometrical Principles involved in the Construction of the Human Frame." In this paper, which to some extent may be considered as a continuation of the papers on the same subject already communicated by Mr. Hay to the Society, the Author proceeds to explain his theory of the natural principles of Beauty as developed in the Human Figure, and to reduce to geometrical principles certain simple and elementary conclusions; classing those angles which are found in the perfect human figure into groups. The chief object of the paper was to prove that the application of the "harmonious angles," thus derived, gives the key so long fruitlessly sought for, of the correct proportions of the human frame, both male and female, not only as regards dimensions, and the relative position of the centres of articulation, but also with relation to outline and contour. The paper was most fully illustrated by a very extensive series of carefully executed diagrams.

A vote of thanks to Mr. Hay was moved by the Rev. Dr. Booth, F.R.S., and seconded by D. Roberts, Esq., R.A. The Chairman announced that a paper on "Norton's Patent Register, for Time, Number, and Distance," would be read at the next meeting of the Society.

GREAT EXHIBITION REPORT.

IN the last Number, a notice was inserted respecting the "Surplus Report" of the Commissioners of the Great Exhibition. On Monday last it was announced in the House of Commons that 150,000*l.* of the Surplus Funds had been appropriated to the purchase of land at Kensington, and a vote of credit for an equal sum was passed by the House, to be applied for the further purchase of land in the same locality.

PARLIAMENTARY PAPERS.

ON Tuesday last, on the motion of the Rt. Hon. Mr. Tufnell, the House of Commons appointed a Select Committee to inquire into the expediency of distributing, gratis, under certain regulations, a selection from the Reports and Returns of the House of Commons, amongst Literary, Scientific, and Mechanics' Institutions throughout the United Kingdom.

EXHIBITIONS OF NEW INVENTIONS.

In the year 1848, the Council of the Society of Arts commenced a series of annual Exhibitions of the Inventions of the preceding twelve months. The object which the Council had in view, was to afford facilities for ascertaining the direction in which inventive men were working, and to call attention to the importance of a permanent Museum of Inventions, which might serve as an historical record of the ingenuity of the age. Such a museum would also show what had been already accomplished in each separate branch of art or manufacture, and by a comparison of the efforts of various minds at different periods, would form the best ground-work and guide for future practice.

The first Exhibition, amongst many other things, served to illustrate, by an extensive series of instruments, the condition of Science as applied to electric telegraphs at that time. It also pointed out, by means of numerous models, the methods which had been suggested for improving the construction of the paddle-wheels of steam-vessels; and still more recently for superseding them by the application of the screw-propeller. Thus the actual condition of the two great desiderata of the day; the transmission of thought along lines of wire, and the extension of steam navigation were indicated, and progress was aided.

Encouraged by the success of this Exhibition, the Council deemed it expedient to continue the course thus commenced. The second Exhibition divided itself into the following classes: Railways and their mechanism—in which was comprised increased safety and economy in the construction of the permanent ways, and in the rolling-stock, especially in the fittings of the passenger-carriages, the axle-boxes, buffers, &c. Novelties in the form and principle of the pressure gauges, for steam and other engines, were also shown, and attracted considerable interest. Attention was likewise directed to contrivances connected with gas and water supply—important branches of town engineering. Meters of various kinds were exhibited in operation, so that their relative merits were capable of being tested by ocular demonstration. Looms and spinning-machinery also formed part of the collection.

About this period, the various novel appliances of magnetism began to excite considerable public attention, and many interesting magnetic machines were exhibited; whilst many novel contrivances for improving the sanitary condition and increasing the domestic comfort of the humbler classes were pointed out.

Still later collections have called attention to improvements in the steam engine, and machinery generally; more particularly to agricultural and horticultural implements, and the application of steam power to those machines.

In 1851, the Great Exhibition obtained for Inventors protection from pillage, by a cheaper and less tedious process than formerly — provisional registration.

The Exhibition of that year displayed an entirely novel feature—the protection of inventions relating to the manufacture of, and designs for, articles of dress. Thus trowsers, jackets, and under-clothing of all kinds, manufactured in the loom without seams, were shown; articles which it was believed would be found to possess equal durability at less cost than those usually made; and though not, perhaps, so commendable in point of appearance, yet offer great inducements to the emigrant and labourer.

It will be seen that these Exhibitions have served to record, as it was designed they should, the leading features of the inventions of the day, and the facilities afforded by the law for protecting the interests both of the employer and of the employed. With a strong conviction of the great utility of these annual Exhibitions, the Council are now engaged in arranging, and propose to open in the ensuing week an Exhibition of the inventions of the past twelve months, which it will be our duty to describe more in detail in our succeeding numbers. It may suffice for the present to say that the forthcoming collection will possess many points of interest, and will include models of several machines, having for their object the facilitating washing of earth in the gold districts. At the same time it may safely be predicted, that under the new Patent Laws which have been in operation since October last, and have already afforded protection to nearly 800 inventions, future Exhibitions will continue to increase, not only in interest, but also in extent.

LIST OF SUBJECTS FOR PREMIUMS.

In publishing the List of Subjects for Premiums for the Session 1852-3, the Council desire to indicate some of those subjects of inquiry which are considered as peculiarly deserving of attention, and for which therefore they offer premiums. The object of the Society has always been to encourage useful inventions, and communications relating to any department of Arts, Manufactures, or Commerce, are received and always meet with due attention; a premium or other reward being given in those cases where the communication is deemed of sufficient value or importance. In the following List of Subjects, which includes the first division of the Prize List, each article is followed by a brief note intended to explain more in detail, the object proposed in offering the premium:

CLASSES I. to IV.—RAW MATERIALS.

1. For the best essay on Salt; the sources from whence it is obtained, and the processes involved in its manufacture.

Great improvements have been introduced in the processes of evaporation and purification; the salt of certain districts is known to be peculiarly suitable for special purposes; extensive beds of rock salt have been recently discovered.

2. For the best essay on Iron Ore, and the Manufacture of Iron, as carried on in different districts and countries; especially contrasting the Iron-manufacture of England with that of America and the Continent of Europe.

Much is to be learnt by comparing together the processes adopted in the iron-works of different countries. A good and accurate account of the chemical, mechanical, and statistical results of iron-making, in various parts of the world, would be a work of the greatest practical value. American iron has been asserted to be superior, for many purposes, to that produced in England. Supposing this to be the case, it is desirable that we should know whether this is to be attributed to a superior method of manipulation, or whether it is not rather due to the nature of the materials used in reducing the ore.

3. For a cheap and efficient mode of extracting the metal from the Iron Sand (Tennaka) of New Zealand.

This sand, which is very abundant, and is said to contain 80 per cent. of metal, has not hitherto been economically reduced.

4. For the invention of any White Metallic Alloy, free from microscopic faults, which may be successfully applied to the Arts, is hard enough for use in reflecting telescopes, and is not liable to be acted upon by the atmosphere.

This is a desideratum, for nearly all the good alloys at present known, suitable for such purposes, are very prone to tarnish when exposed to the air.

5. For the discovery in England, or the importation from any of the British Possessions, of Plumbago, or of some other substance which may be used in lieu thereof, equal in quality to that now obtained from Cumberland.

The use of plumbago is greatly on the increase, whilst the supply appears rather to diminish.

6. For the discovery of a New Fuel, which shall occupy less space, and be of less weight than any now in use, without diminution in the amount of heating power, or liability to injure metals in contact with it.

This is a point of the utmost importance for marine navigation, the extension of which is at present much limited by the great bulk and weight of coal required to be carried. For long voyages the necessity of calling at various stations to "coal"—coal sent out from this country at a vast expense—causes great delay, which is of serious consequence with mail-steamers.

7. For an account of the processes involved in the preparation of Charcoal, and its recent applications to manufacturing and other purposes.

The comparison of wood, coal, and peat charcoal, as regards modes of manufacture, cost, and practical uses, would be valuable. Charcoal is now extensively used as a filtering, purifying, and deodorizing agent.

8. For the best essay on the Chemical Composition of Rocks—the changes which they have undergone, and are now undergoing; especially in relation to those which are used for building and other similar purposes.

There are many chemical and geological points connected with the structure of stone, with which our builders are unacquainted, and a knowledge of which would tend to render stone buildings less liable to perish from atmospheric influences than they now are.

9. For the best essay on the Nature, Composition, Properties, Geological Distribution, and Working of Flag, Slate, and other Stones used for Paving.

Recently Welsh flag slate stones have been introduced for paving, and other purposes, which are stated to possess many advantages in point of durability and economy.

10. For the best essay on the Nature and Properties of Granite; on the relative qualities of the material obtained from quarries in England, Scotland, Ireland, and the Channel Islands; and their comparative fitness for Architectural and Engineering purposes.

There are various positions in which one kind of stone is superior to another, though it may not be equally useful for all purposes; it is therefore desirable that we should know which kind may be most advantageously applied in any particular structure, or part of a structure.

11. For an account of a new method of making Sulphuric Acid, which shall be equally efficient with that at present employed, and which shall not require the large leaden chambers now in use.

The many purposes for which sulphuric acid is now employed in the Arts, renders it most desirable to do away with the very cumbrous and expensive "plant" at present necessary.

12. For an account of the manufacture of pure Hydrochloric Acid, free from all metallic impurities.

Pure hydro-chloric acid is now becoming a most important agent; a good and simple process for obtaining it is therefore desirable.

13. For the production of a bright Blue Colour, applicable to the manufacture of Papier Maché, and not liable to be affected by the atmosphere.

There is no known blue suitable for this purpose. Ultramarine is a body colour of an oily nature, and therefore not well-adapted to this particular manufacture.

14. For an account of the manufacture of pure Potash and Soda, free from earthy impurities, as re-agents for the use of Chemists.

Chemists are well aware of the extreme difficulty of obtaining the pure fixed alkalies; they are hardly to be met with in trade.

15. For an account of the economic manufacture of Oxide of Zinc, and its incorporation with other colours, so as to render them not liable to be acted upon by sulphurous gases, or to fade on exposure to the light and heat.

The discrepancy in the opinions entertained by practical men as to the value of this substance, and its effect on the health of workmen, renders this a most interesting question for discussion. Good specimens of colours prepared and rendered permanent, in combination with the oxide of zinc, were exhibited at the Great Exhibition.

16. For the importation of not less than half a ton of well-dried Plantains, or Bananas from the West Indies.

The fruit of the Plantain, when dried, somewhat resembles the fig; it is wholesome, has an agreeable flavour, and is not liable to suffer from the attack of insects.

17. For the importation from any British Possession, of not less than one hundred pounds of Dried Fruits, of equal quality with those now imported from the Mediterranean.

Good samples of dried fruits have been received from Australia, but hitherto not in sufficient quantities to constitute them an article of commerce.

18. For the importation of not less than one pipe of Wine, of good marketable quality, made from the produce of Vineyards in Australasia.

Light wines of promising quality were recently imported from Australian vineyards, but in their then condition they were not adapted to the English market.

19. For the best essay on the theory and practice of Fermentation, particularly as applied to the Art of Brewing; so as to modify, or altogether dispense with the intermediate process of malting.

Though this subject has engaged the attention of our ablest scientific men, it would seem that their investigations have not yet had much effect on the manufactures in which fermentation is one of the principal elements. On the other hand, practical men assert that nothing which has yet been propounded offers a sufficient explanation of the causes in operation, or constitutes a true guide in practice.

20. For an account of the processes employed in the manufacture of Starch,—the sources from whence it is obtained, and the purposes to which it is applied.

Starch has, of late years, been produced from various new sources—such as rice, Indian corn, sago, plantain meal, potato, fern, &c. It has also been obtained by alcoholic saturation in place of the old process of fermentation.

21. For a method of preparing an Engine Size for the use of Paper-makers, superior to any now in use.

By the present processes of animal-sizing machine-made papers, unequal surfaces are frequently produced.

22. For the importation of any New Substance which can be successfully used as a substitute for Caoutchouc.

Amongst the milky-juiced plants of tropical countries there are doubtless some affording substances analogous to caoutchouc; the many and increasing uses of that material render substitutes for it, as well as new sources of supply, very desirable.

23. For the importation from China, India, or elsewhere, of any new Vegetable Oils or Fatty Substances, which can be used as food, or are applicable to manufacturing purposes.

Any new oils, particularly those which are solid at the common temperature (60° Fahrenheit) would be of great value.

24. For the importation of not less than ten gallons of Olive Oil, the produce of Australasia, or any other British Possession.

The samples of Australian oil sent over are excellent; but as yet it has not become, to any extent, an article of trade.

25. For the production of Oil and other Substances from the Cotton-seed, and the application of the refuse material to agricultural or manufacturing purposes.

Cotton-seed oil has, for some time, been largely manufactured in the South of France and elsewhere. The cake forms a valuable food for cattle.

26. For a method of refining Vegetable Oils, by a quick and cheap process, so as to render them fit for burning in lamps, and for lubricating machinery.

None of the modes at present employed for this purpose are, in all respects, satisfactory, or to be depended upon. A good and simple mechanical means of refining oil is much needed.

27. For any Unguent suitable for lubricating machinery; with an account of the substances at present employed for that purpose, and from whence derived.

The large demand which has been created by the increased use of machinery in all manufacturing processes, and the mechanism connected with locomotion, renders this, though comparatively a new article of commerce, one of great importance. It should not be liable to solidify by heat, and should be a good anti-friction agent.

28. For improvements in the manipulation of Bees'-wax, so as to render it applicable to new purposes in art or manufacture.

It is believed, that if the comb was made use of previous to being charged with the impurities and discolouring matter due to the honey, it might be made more extensively useful in the Arts.

29. For a cheap and efficient means of extracting Dyes from Dye-woods and other substances.

By the old processes, upwards of 10 per cent. of colouring matter is said to be lost.

30. For the importation of not less than one ton of the Galium Tinctorium from Canada.

This root is stated to yield a very fine flesh lake. Although imported into this country many years since, it has not yet become an article of commerce. This may, perhaps, be due to a deficiency in the mechanism for extracting the colour, or possibly to an ignorance as to the value of the root on the part of the natives themselves.

31. For an account of improvements in Dyeing Turkey Red, by which the time required to produce a fast and brilliant colour may be reduced.

At present, a tedious and dirty process, which has been the subject of few, if any, improvements for many years past.

32. For the best samples of Cotton from the South African Colonies.

Excellent samples of cotton have been received from Port Natal; the staple was very good, but it was injured by bad handling.

33. For the best samples of Cotton from the Western Coast of Africa.

The unhealthiness of the climate of these parts renders the cultivation of cotton, which is indigenous to the soil, a matter of impossibility by Europeans. A simple means of cultivating and preparing the cotton for the market, within the comprehension of the natives, is therefore very desirable.

34. For the most successful Cultivation of Flax, in British India or Australasia.

35. For an essay on the Flax Plants of India; the purposes to which they are at present applied, and the best means of employing the refuse material.

Large quantities of the flax plant are annually grown in India for the seed alone. The only use to which the fibre is applied is that of making fishing-lines.

36. For the importation of at least two tons of any Vegetable Fibre, applicable to all the purposes for which Hemp is now used, and equally cheap, strong, and durable.

37. For the best sample of any new Ornamental Wood, suitable for the manufacture of furniture.

New Zealand has already furnished some excellent specimens of woods, which have been applied successfully for this purpose. The vast, unexplored tracts of Australasia and Canada give promise, from what we already know of them, that many valuable woods may also be obtained from those quarters.

38. For the introduction of a cheap and efficient substitute for Alpaca Wool.

Owing to the large demand for this article of late years, and the comparatively limited sources of supply, it is essential that a cheap and good substitute should be introduced.

39. For the importation, from any British Possession, of not less than one hundred pounds of Silk proper for manufactures.

40. For the importation, from the East Indies, of Silk equal in quality to the best Italian, or China Silk.

Great improvements have recently been effected in the winding and dressing of Bengal silks. They are still, however, harsh and inferior in comparison with Italian silks.

OFFICIAL RETURNS OF FOREIGN AND COLONIAL POSTAGE.

The following returns, of great value at the present time, when public attention is directed to the establishment of a Uniform Penny rate to our Colonies, have been courteously furnished to the Postage Association, by direction of the Postmaster-general. This act, and the communications with the Foreign and Colonial Offices, marks a new era in correspondence with public offices, and will be duly appreciated.

General Post Office,
15th November, 1852.

Sir,—Your letter of the 9th inst. having been laid before the Postmaster-general, I am directed by his Lordship to forward in reply, for the information of the Council of the Colonial and International Postage Association, the enclosed copy of the Estimate of Foreign and Colonial Postage for 1848 (the latest that has been

prepared), adding that the increase in the Foreign and Colonial correspondence since that period is probably not very different from that in the number of letters in the United Kingdom generally, viz., 15 per cent.

I am, Sir, your obedient servant,
Rowland Hill.

G. W. Yapp, Esq., &c.,
18, John-street, Adelphi.

RETURN SHOWING THE ESTIMATED GROSS AMOUNT OF FOREIGN AND COLONIAL POSTAGE FOR THE YEAR ENDED 5TH JAN., 1849.

(Distinguishing the earnings of each line of Packets.)

MAILS.	GROSS POSTAGE. (*Transmarine Postage only.*)	
French:	£	£
France and Algeria	37,466	
Turkey, Levant, &c	13,742	
Sardinia and Southern Italy	9,536	
Spain and Portugal	5,758	
Mediterranean	6,799	
British Colonies, &c.	16,016	
Ship	271	
	89,588	
Deduct amount repayable to France	35,614	
		53,974
Belgian:		
Belgium	10,669	
Germany	594	
British Colonies, &c	630	
Ship	28	
	11,921	
Deduct amount repayable to Belgium	2,752	
		9,169
Prussian (*including Bremen closed mail*):		
Prussia	16,180	
Transit	20,022	
British Colonies, &c	1,636	
Ship	147	
	37,985	
Deduct amount repayable to Prussia and Belgium	22,646	
		15,339
Dutch:		
Holland	6,995	
Germany	44	
British Colonies, &c.	766	
Ship	36	
	7,841	
Deduct amount repayable to Holland	1,368	
		6,473
Hamburg and North of Europe:		
Hamburg	9,536	
North of Europe	4,577	
British Colonies, &c.	1,548	
Ship	199	
	15,860	
Deduct amount repayable to Hamburg	3,628	
		12,232
American:		
British North America	33,237	
United States	64,531	
Continental Letters, &c	12,062	
		109,830
West India:		
British West Indies	23,884	
Foreign West Indies	16,794	
Continental Letters, &c	10,997	
	51,675	
Add for conveying French Mail to and from Chagres	416	
		52,091
Carried over		259,108
Brought over	£259,108	£
Cape, &c.:		
H.M. Ships, Cape of Good Hope, &c.	5,115	
		5,115
Peninsular:		
Gibraltar	3,627	
Spain	2,430	
Portugal	5,893	
Continental Letters, &c.	906	
		12,856
India (*viâ* Southampton):		
India	42,047	
Gibraltar	558	
Mediterranean	6,312	
	48,917	
Add for conveying Dutch Closed Mail	209	
	49,126	
Deduct Amount allowed to the East India Company, by order of the Treasury	21,658	
		27,468
India (*viâ* Marseilles):		
India	36,413	
Mediterranean	3,559	
	39,972	
Add for conveying French India Mail	1,169	
	41,641	
Deduct Amount due to the French Office for conveyance through France	11,193	
		30,448
Brazil:		
Brazil	12,884	
Continental Letters, &c.	2,753	
		15,637
Sydney:		
Sydney	5,730	
Continental Letters, &c	487	
		6,217
African:		
Sierra Leone	383	
		383
Ship:		
Ship Letters	35,827	
Continental Newspapers	16	
		35,843
Amount of Inter-colonial Packet Postage, collected in the East and West Indies, British North America, and China, for the year ended 5th April, 1848	13,169	
		13,169
Amount of Inter-colonial Packet Postage, collected by the Agents at Alexandria, Malta, and Gibraltar, for the year ended 5th Jan., 1849	1,847	
		1,847
Red Sea Postage, collected at Bombay, Madras, Calcutta, Ceylon, Suez, and Hong Kong, for the year ended 5th April, 1848	6,405	
		6,405
Postage collected by Agents at Foreign Ports, for Paid Letters and Newspapers, from one Foreign Port to another, for the year ended 5th April, 1848	4,816	
		4,816
Postage collected by the French Office, upon Correspondence between Malta, Alexandria, and France, and the French Offices in the Mediterranean, to the 5th Jan., 1849	931	
Carried over		419,312

MAILS.	GROSS POSTAGE. (*Transmarine Postage only.*)	
	£	£
Brought over		419,312
Postage collected by the Agents at Malta and Alexandria, upon the like Correspondence, for the same period	866	
	1,797	
Deduct Amount repayable to France	392	
		1,405
Total..		420,717
Deduct for Dead Letters		14,819
		£405,898
Colonial Inland Postage.		
Amount of Colonial Inland Rates, deducted from the Gross Receipts of the American and West India Mails above	10,996	
Deduct for Dead Letters ...	313	
		10,683
Amount of Internal Postage collected in British North America and Jamaica, for the year ended 5th April, 1848 (exclusive of the above £10,996).........................	84,840	
Deduct for Dead Letters ...	2,417	
		82,423
		£499,004

Note.—The sum of £69,417 has been deducted from the gross receipts of the several Mails, as the amount representing the British Inland Rate upon Foreign and Colonial Letters, as directed by the Postmaster-General's Minute of March 17th, 1849.

The Government Transmarine Postage (£67,256) is included in the above amount of £499,004.

General Post-office,
August 1*st*, 1849.

Signed, { F. W. Herbert,
R. Z. Beechcroft.

LOCAL MUSEUMS.

A circular was sent to the Institutions in union, some months since, on the interchange of specimens, as a means of assisting in the formation of local museums. It was suggested that in almost every place specimens in illustration of local manufactures, or particular branches of natural history, might be collected; and that by a systematic exchange of these amongst various Institutions, a number of very useful little museums might be formed at a comparatively trifling expense. This proposition was very well received by a number of Institutions, and though in some cases want of house-room, and in others want of funds, were mentioned as obstacles, yet in the large majority of Institutions the plan of co-operation met with decided approval and support.

A second circular, intended to explain still further the mode in which it was proposed to carry out this system of collection and exchange, was issued at the beginning of September, and those institutions which were willing to adopt it were invited to state the nature and extent of the local collections they were willing to prepare. In this circular it was pointed out that the specimens need not be large, and that, in fact, a moderate-sized cabinet, or chest of drawers, would suffice to contain a very numerous collection. Two principal objects were contemplated in sending out these circulars, the one being to show how both trouble and expense might be saved to all by mutual co-operation; and the other, the practical improvement of local museums. Many Institutions have large collections of curious and interesting articles, but very few indeed have useful museums.

A museum, properly considered, is not a collection of curiosities, monstrosities, antiquities, and artistic works, grouped together in glass-cases, in a species of native confusion; but if it deserves its name, is a place in which instruction is to be gained, and consequently in which order, arrangement, and method, is evident throughout. Arrangement in a museum is of the very first consequence; without it the specimens, however good, are isolated, and tend only to confuse, whilst when well arranged, and according to some kind of order, they at once become instructive and suggestive; so that even a careless observer cannot fail to learn something from their examination. Collections may be formed in illustration of various subjects, and for many different purposes; they may be made to indicate the several branches of natural science,—such as Geology, Mineralogy, Botany, Zoology, Entomology, etc.; they may be formed to illustrate the mechanical arts and manufactures; they may be Historical, and designed to show the progressive development of the human race; or Ethnological, illustrating the habits and customs of particular people; excellent artistic collections too may be made, in which beautiful forms, and appropriate combinations of colour, are shown, so as insensibly to educate the eye to the appreciation of the true principles of taste: but in these, and in all similar cases, the collections lose their chief value if they are not well arranged; the systematic and consecutive arrangement constituting an essential feature in all really instructive museums. A geological collection, for example, in which specimens of the various strata of the earth are arranged in the same order as that in which they naturally occur, and each one accompanied by its own peculiar organic remains, and the mineral productions, or metallic ores occurring in it, is highly instructive; but if we add to it good geological maps, and illustrations of the uses in the arts to which those ores and stones are applied, its value is very greatly increased.

It may be said that all this involves great trouble and expense,—and so no doubt it must, on a large scale; in the present proposition it is not at all contemplated to form museums, but merely to form a number of little local collections; bearing in mind, however, that the value of the specimens so brought together depends almost entirely on the manner in which they are selected, and on their being afterwards arranged and shown in a connected and *suggestive* manner. The following list, which includes those Institutions which have expressed a desire to exchange local collections, is at present by no means complete, but it is thought better to publish it in its present state, and to request that any additions or alterations which are desired may be communicated with as little delay as possible.

1. Bacup.—A. Illustrations of the various stages of the cotton manufacture, from the raw materials to the

finished article. B. Collections in illustration of the geology of the district.

2. Bexley Heath.—Illustrations of the geology of the chalk measures.

3. Bilston.—Illustrations of the geology of the Staffordshire coal-fields, and of the manufacture of iron, including specimens of the various ores and raw materials, and samples of the metal obtained, so as to show the various stages of the process.

4. Bootle.—Specimens in illustration of the manufacture of bricks, and common tiles.

5. Bridgwater.—A. Specimen of the entire series of the rock formations of the county, with selections of organic remains. B. Specimens in illustration of the manufacture of Bath-brick and scouring-brick.

6. Burnley.—A. Illustrations of the geology of the district, including fossil remains. B. Some botanical collections. C. Illustrations of cotton manufacture.

7. Cardiff.—Specimens of steam-coal.

8. Cupar Angus.—Specimens in illustration of the manufacture of flax; from the raw material, as pulled, to the finest finished linen.

9. Dundalk.—A. Illustrations of the flax manufacture. B. Illustrations of the art of tanning. C. Specimens in illustration of the geology of the surrounding district.

10. Isle of Wight.—Collections in illustration of the geology of the fresh-water formations of the Isle of Wight.

11. Manchester.—Collections in illustration of the cotton manufacture in its various branches, especially in relation to spinning, weaving, and printing.

12. Macclesfield.—Illustrations of the silk manufacture; beginning with the raw article, and showing the various operations through which it passes, and the processes to which it is subjected.

13. Margate.—Illustrations of the geology of the chalk measures, including specimens of the leading chalk fossils.

14. Merthyr Tydvil.—Collections in illustration of the manufacture of iron, as carried on in South Wales.

15. Morpeth.—Illustrations of the geology and botany of the district.

16. Newark.—Geological specimens, including samples of plaster-stone, illustrating the manufacture of plaster of Paris, and its uses in the arts; fossil shells, and other organic remains.

17. Newbury.—Samples of wool, selected so as to show the various qualities, and the points of chief importance in connection with the wool trade.

18. Northampton.—Collections in illustration of the coleoptera of the county; each collection to contain from 200 to 250 species (carefully named), and averaging 500 specimens.

19. Oulton.—Illustrations of the flax manufacture.

20. Portsea.

21. Princetown.—A. Specimens in illustration of the production of flax in Devonshire. B. Collections in illustration of the botanical, geological, and other natural productions of Dartmoor. C. Collections of the metallic ores raised in the district; arranged so as to show the operations to which they are subjected.

22. St. Just.—A. Collections in illustration of the geology of the western districts of Cornwall. B. Collections in illustration of the entomology of the district.

23. Shelton (Staffordshire).—Specimens of the various materials used in the manufacture of earthenware and china, together with specimens of the manufactured article in every stage of its progress, from the first rude form, to the state in which it is sent to market.

24. Stamford.—Geological collections in illustration of the geology of the district, including organic remains, as well as specimens of those strata which are worked for economical purposes,

25. Stoke-on-Trent.—Specimens of the raw materials used in the manufacture and ornamentation of china; accompanied by illustrations of the manufacture in its different stages

26. Tonbridge.—Illustrations of the manufacture of "Tonbridge-ware," in all its stages. Collections of umbelliferous plants from the neighbourhood of Tonbridge, botanically arranged, and accompanied by drawings, or dissected specimens, so displayed as to exhibit the structure of the seeds, and other physiological peculiarities; with a tabular view of the whole order.

27. Whitehaven.—A. Collections in illustration of the geology and mining products of the district. B. Collections of algæ from the coast of Cumberland. C. Illustrations of the manufacture of rope and cordage, showing the stages of the process. D. Similar collections in illustration of the manufacture of paper.

28. Worcester.—Collections in illustration of the geology of the neighbourhood.

HOME CORRESPONDENCE.

LECTURES.

Sir,—With much interest and pleasure I have read over the first two Numbers of the Journal of the Society of Arts. Such a publication, if conducted with judgment and energy, may be made to meet a want which is becoming every day more felt; I refer to the growing necessity of some medium of communication between individuals and societies bound by a common sympathy, and united in the great object,—however they may differ as to the means,—of promoting education and useful instruction. Permit me to use your Journal to convey my humble opinion, that your Council or Institute's Committee, or whatever body may have the management of the Institute's movement, are unprofitably expending much ill-directed energy and misspent zeal in a fruitless attempt to put life into the dry bones of a worn-out system, which for the last twenty years has been in operation, and is now fast dying out. It has been tried, and found wanting. It does not meet the requirements of the day. Men now want the realities of knowledge; they will no longer be content with shams and make-believes. But enough of this. Why do the Council not attempt to grapple with the real difficulties of popular instruction? Why do they not organize some plan by which they might convert the Mechanics' Institutions into People's Colleges, like Sheffield People's College. This would be an object worthy of the Society of Arts, and of the great union which has been formed under its auspices. I do not mean that the local control or self-government of these Institutions should be interfered with, but a great advantage would be gained if they could all be induced to combine under some well-digested scheme. It is quite plain,—so plain as not to need illustration,—that the Institutions in their collective capacity could secure, at a small cost, advantages which even the most wealthy, in their present isolated position, can with difficulty obtain,—I refer to models, casts, diagrams, class-teachers, cheap editions of standard books, &c., &c.

The Society of Arts might, if the scheme were comprehensively worked out, appoint examiners, who should hold examinations at stated times, and issue certificates of different orders of merit. I will not, on the present occasion, trespass further on your pages. My object is rather to elicit the views of your correspondents on this question than to enforce my own. With your kind permission, I shall again return to this subject.

Y. Z., President of an Institution.

TAXES.

Sir,—Many Institutions have long struggled on with limited funds, but the very means which the Legislature has kindly devised to assist them, often, through legal quibbling, are rendered inapplicable,—I allude to the Act which was intended to afford to Institutions, established for the promotion of literature, science, and art, freedom from the payment of rates. This is no slight assistance, for the few pounds thus annually saved would frequently enable an Institution to work on until more prosperous days. There is no doubt the Legislature intended to assist such Institutions as are comprised in our Union, but unfortunately in every town parties may be found opposed to their progress; and more unfortunately still, professional men too are at hand ready to lend their subtleties for the same purpose. It is in vain we go to the expense of certificates from barristers, have the rules registered and confirmed at quarter sessions, and pass through the various requirements of the Act, the measure is so deficient that there is not an Institution in the country but may be deprived of its beneficial operations. Let us, therefore, unite; and may the voices of our 90,000 members in petition procure a measure which will be received with gratitude by many a small Institution, and which will confirm to us that which the beneficence and wisdom of Parliament intended for our benefit. W. T. J.

BYE-LAWS.

Sir,—The Committee of our Institution are now engaged in drawing up a code of laws and regulations for our future management. Can you assist us with a copy of the rules of any other established society? We should be very glad to profit by the experience of older Institutions; and I would suggest that the Society of Arts might render valuable assistance in this, and similar cases, by collecting copies of the rules of some of the best managed Institutions, and binding them into a volume, which might subsequently be lent to the Committee of any Institution desirous of drawing up or amending similar bye-laws. P. S.

GREAT EXHIBITION.

——— Mechanics' Institution, Dec. 7, 1852.

Sir,—Some time ago we applied to the Royal Commissioners of the Great Exhibition for a copy of the Illustrated Catalogue and Jury Reports, for the use of the members of our Institution; to which we received a reply, stating that no grants of the kind to institutions like ours had been made, but that the application had been placed on record, and if at any subsequent time the Commissioners should determine to make such grants, our application should not be overlooked. Probably if the Special Committee of the Associated Institutes were to incite the various Institutions throughout the country (as in the case of Parliamentary Reports) to make similar applications, or if they were themselves, aided by the Council of the Society of Arts, to make a similar application on behalf of the associated and other kindred institutions, success might probably attend the application, which would confer a boon on ours and other similarly poor Institutions. Your obedient servant,

J. H.

REPORTS OF INSTITUTIONS.

REIGATE MECHANICS' INSTITUTION.

The Fifteenth Annual Report of this Institution has just been published, from which it appears that, during the past year, fourteen Lectures have been delivered on various subjects, chiefly literary. The Library, which now numbers upwards of 1,100 volumes, has also received valuable accessions. The Treasurer's statement of accounts shows that the

	£	s.	d.
Receipts have been	£112	3s.	5d.
Payments	111	1	6
Leaving a balance of . .	£1	1	11

We extract the following paragraph entire:

"The Committee beg to offer their congratulations on this Institution being received into union by the Society for the encouragement of Arts, Manufactures, and Commerce, whereby several advantages have already accrued. Not only will a knowledge of all the newest improvements and inventions in the Arts and Sciences be immediately received from this source, but the Institution will be entitled to receive the Reports and Transactions of the Society of Arts, of which several volumes have already been received, together with a box of colours and pencils for drawing, with a small box of mathematical instruments of unexampled cheapness—namely, a shilling for the box of colours, and half-a-crown for every box of instruments. Also, at the request of that Society, they have received, as issued from the Privy Council-office, a series of thirteen volumes of Reports from the Inspectors of Schools to the Committee of Lords of the Privy Council for Education, which reports are in the highest degree interesting to all who take an interest in the all-important subject of popular education. This friendly connection with the Society of Arts, therefore, your Committee considers to be a subject of peculiar felicitation."

MUCH WENLOCK AGRICULTURAL READING SOCIETY.

The eleventh annual meeting of this Society was held on the 30th ult.

The Report stated that:

"The means of acquiring useful knowledge have been, of late years, greatly augmented in our chief towns, and even in not a few places of minor importance; but much remains to be done, especially in our small towns, and in agricultural districts. * * * There are many persons in these districts yet far behind the intelligence of the age, chiefly because the means of information have not been extended to them, or the value and importance of progress in knowledge fairly set before them. * * * Agriculture now, more than ever, calls for mental progress; and the extension of knowledge among the cultivators of the soil is not only essential to their own welfare, but to the prosperity and security of the nation of which they form so large and important a part. To aid in the extension of useful knowledge, amongst this class in particular, this Society was formed. * * * Your Committee has the pleasure to report the near approach to completion of a large and handsome room for lectures or public meetings, with an additional room for a library, and a house for the Librarian. The cost of the building when complete will be 800*l.*, of which 60*l.* still remains to be subscribed. * * * During the year 112 volumes have been added to the library; and a collection of forty-one specimens of fossils from the Madeley mining district, to the museum."

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

Royal Society. Nov. 30.—The Anniversary Meeting was held this day, the Earl of Rosse, President, in the chair. His Lordship delivered his annual address, passing under review the state and prospects of science. The Medals were then awarded, as follows: The Copley Medal to Baron Humboldt, for his eminent services in Terrestrial Physics. This medal was received for the Baron by Chevalier Bunsen, who, in a long and eloquent address, returned the thanks of Baron Humboldt for the high honour paid him by the Society. The Rumford Medal was awarded to Professor Stokes, of Cambridge, for his very remarkable discovery of the "Change in the Refrangibility of Light." One of the Royal Medals was awarded to Mr. Joule, for his paper on the "Mechanical Equivalent of Heat," printed in the *Transactions*; and the second Royal Medal to Mr. Huxley, for his valuable papers on the "Anatomy and Affinities of the Family of the Medusæ." The election of Council and Officers for the ensuing year was then proceeded with, when the following noblemen and gentlemen were declared to be elected:

President: The Earl of Rosse.—*Treasurer:* Colonel Sabine.—*Secretaries:* S. H. Christie, and T. Bell, Esqs.—*Foreign Secretary:* Captain W. H. Smyth, R.N.—*Other Members of the Council:* *Rev. J. Booth, LL.D.*; B. C. Brodie, Esq.; C. Brooke, Esq.; *Lord Enniskillen*; J. P. Gassiot, Esq.; *T. Graham, Esq.*; *Dr. J. D. Hooker*; *W. Hopkins, Esq.*; *H. B. Jones, M.D.*; *G. Newport, Esq.*; Lieut.-Colonel Portlock, R.E.; *J. M. Rendel, Esq.*; *Dr. W. Sharpey*; W. Spence, Esq.; Dr. N. Wallich; and *Lord Wrottesley.*

The names in *Italics* are those of the new Members.

Zoological Society of London. Dec. 2.—At the Monthly Meeting held at the Society's house in Hanover-square, Mr. Broderip, Vice-president, in the chair, his Excellency the Count Colloredo, the Countess Colloredo, Hon. T. L. Powys, and Messrs. J. E. Cole, S. C. Lakemann, G. Whateley, and F. Cramp, were elected Fellows. The Report from the Council stated, that notwithstanding the long-continued wet weather, the collection of living animals was in a remarkably healthy condition, and that several donations had been received during the last month, in which the number of visitors presented a considerable increase as compared with the month of November, 1851.

PROCEEDINGS OF INSTITUTIONS.

Basingstoke.—The members of the Mutual Improvement Association were last week favoured with a talented and highly interesting Lecture on "Chivalry and Heraldry, and their Relics in England," by the Rev. J. W. Wyld, of Southampton. The lecturer stated, that chivalry prevailed in Europe after the demolition of the Roman empire, but was brought into England by its Norman conquerors. Its influence upon society was very beneficial, as it introduced politeness, and undermined the barbarous customs of a dark and cruel age. The Normans, it was observed, did not like submitting their complaints to the decision of a jury, and hence arose what is termed "Wager of Battle," several instances of which were pleasantly adduced. In heraldry, too, Mr. Wyld was equally amusing and instructive.

Belfast.—On Monday week a Lecture was delivered to the members of the Working Classes' Association, by the Rev. Mr. O'Hanlon, on "The Institutions and Literature of Greece." The lecture, which was able and eloquent, occupied two hours in the delivery, and was listened to with great attention by a large audience. Donations of 10*l.* from Lord Dufferin, and 1*l.* from W. Mullan, Esq., have been received by the Treasurer.

Cheltenham.—Dr. Wright recently delivered a Lecture at the Literary and Philosophical Institution, "On the value of Fossils, as showing the distinct ages of Nature." The lecturer confined his remarks principally to shells and echinæ, and observed, that fossils showed that a large portion of the surface of the earth was made up of the remains of animals and plants. The climate of the earth having varied at different epochs—the Arctic Regions and England having once enjoyed a tropical climate—successive generations were developed, died away, and became extinct. Thus the whole of the population of the stratified rocks, from the chalk downwards, belonged to extinct species.—W. M. Tartt, Esq., the President, then read a paper, entitled, "Anecdotes of Earthquakes," a subject which could not fail to be interesting at the present time. Mr. Tartt remarked, that in the records of the Old Testament there were only three passages in which earthquakes were mentioned. Classical writers of antiquity, in alluding to the subject, did not describe the phenomena by which they were accompanied. It was not difficult to trace the line of great volcanic changes, as, for instance, along the route from Sienna to Rome; and in every country where great organic changes had occurred, there must have been earthquakes equally violent. The earthquakes of antiquity were then described, and a very minute account was given of one which occurred in South America in 1812.

Darlington.—A Special Meeting of the members was held on the evening of the 1st inst., in reference to the erection of a building for the purposes of the Institution. Henry Pease, Esq., the President, took the chair. Miss Pease, of Feethams, having presented 400*l.* to the building fund, on condition of the use of the lecture-room being gratuitously given to the Temperance

Society, two days and nights in the week,—the terms upon which such privilege was to be enjoyed were laid before the members, and approved of unanimously. A site has been purchased of the Earl of Beverley, and the Committee will immediately take the necessary steps for commencing the building. It will contain a library, reading-room, class-rooms, large lecture-hall, and ante-rooms, together with accommodation for a person to reside on the premises. The cost is estimated at 1,500*l.*

Glasgow.—The Lecture Session at the Athenæum commenced in October, with an excellent and well-illustrated course on "The Gold Regions of Australia," by John Macadam, Esq., F.R.S.S.A. A second interesting course has just been concluded, by Isaac Taylor, Esq. (author of "Fanaticism," &c.), on which there has been a very large attendance both of members and the public, the receipts from the latter being nearly sufficient to cover the entire expenses of the course. This month George Buckland, Esq., of London, is to deliver a course on "Music;" but what is looked forward to with unusual interest is a Lecture which the Duke of Argyll, the President of the Institution, proposes to deliver on some literary or scientific subject, as soon as his public engagements will permit.

Huddersfield.—The Committee of the Mechanics' Institution, anxious to afford every facility for the improvement of the voluntary teachers of the institute, have commenced a series of fortnightly meetings, for the express purpose of discussing the best modes of teaching the various branches of learning which are at present taught in the Institution. At a recent meeting, Mr. T. V. C. Hardy, Principal of the Huddersfield College, read a paper explanatory of the mode of teaching English.

Leeds.—The annual *conversazione* of the Philosophical and Literary Society was held on the 2nd instant. The President delivered a short introductory paper, giving an account of the relation of the Italian *conversazione* to the English *conversazione.* Dr. Heaton then performed some interesting experiments in illustration of the effects produced by simple chemical agency, in the development of colours. The Rev. W. Sinclair afterwards introduced a paper on Epigrams, in which he showed, that instead of a satirical witticism, or play upon words, as it is generally explained among the moderns, it consisted of some gentle moral and perceptive truth, elegantly and pointedly expressed. Subsequently, Mr. W. Boyne read a short paper on the names of places in and about Leeds, and Mr. C. L. Dresser explained the process of photographing upon glass.

Leith.—On the 30th ult., Mr. Moncrieff, M.P., delivered an Address in the Assembly-rooms, on behalf of the Mechanics' Library, which already contains upwards of 4,500 volumes, and is open to all at a nominal rate. Mr. Moncrieff remarked, that the recent discoveries in astronomy formed an apt type of all human knowledge. There was much which had not yet been discovered, but this should not discourage the student. The habit of observation gave almost a new sense to the observer. It was the same with the powers of reflection. The mechanical arts in their higher branches, especially in the present day, were themselves admirable trainers of intellect, and the mind might still be at work even while the hands were engaged.

Lymington.—On Tuesday evening, the 30th ult., Mr. G. Banks, of this town, delivered a Lecture to the members of the Literary Institution, "On Architecture, in reference principally to that of Egypt." The lecturer dwelt on the grandeur, vastness, and admirable artistic skill displayed in the construction of those now solitary but magnificent temples scattered throughout the valley of the Nile, which, after the lapse of thousands of years, testify, even in their ruins, to the genius of one of the most refined, but at the same time one of the most superstitious, nations of antiquity.

Lynn.—Mr. Henry Edwards, the President of the Conversazione and Society of Arts, recently addressed a very long letter to the Editor of the *Lynn Advertiser*, relative to a proposal for uniting, under one roof, the several literary, scientific, and artistic societies of the town. Mr. Edwards discusses the advantages which would probably result from such a combination, especially when taken in connection with the general Union of Institutions. He estimates the cost of a suitable building and land at £5,000, which he proposes should thus be raised:

1. The Corporation (or an equivalent by way of rent-charge)	£1,000
2. Mortgage of the whole property, at 4 per cent.	2,000
3. 200 shares, of £10 each, limited to 4 per cent.	2,000
	£5,000

The interest on the £4,000 might be provided for by a certain low rent chargeable to each society.

Maidenhead.—The Committee of the Literary, Scientific, and Mechanics' Institute, with their Secretary Mr. C. Brown, have recently been very actively engaged in getting up a local Exhibition, which has been opened to the public, and we are happy to learn, attended with marked success. The Town-hall was appropriated for the purpose, and was fitted up with cases round the walls, a central table, side-tables and other conveniences; the ante-room being filled with choice plants. The collection consisted of a vast array of paintings, specimens of natural history, relics of antiquity, and the products of invention. The exhibition is stated to have been very gratifying, and must have proved highly satisfactory to its promoters. It is worthy of notice, that three days have been devoted to the admission of members of neighbouring Institutions, simply on the production of their card of membership.

Newbury.—Mr. G. Grossmith, of London, delivered a Lecture on the evening of the 30th ult., to the members of the Literary Institution, on "English Notions of American Character." After analysing the works of Parkinson, Janson, Ashe, Birkbeck, Hamilton, Basil Hall, and Mrs. Trollope, the lecturer proceeded to show the spirit and temper in which most of our English travellers had written their impressions of the people. He then contrasted the habits and peculiarities of the Americans with our own, dwelling chiefly on the social characteristics of Yankee-dom.

NOTICES TO CORRESPONDENTS.

Country Institutions.—Correspondents who are so good as to send reports of proceedings, are requested to forward them not later than Tuesday morning, or they will be too late for insertion in the following Friday's Journal.

Subscribers to Journal.—We cannot undertake to forward the Journal to unknown correspondents. In reply to a number of communications, we must state that it can be obtained through the usual trade channels.

Members.—Several Members of the Society have complained of not receiving the Journal. In every case, however, it has been found that they were duly delivered, and that the blame really rested with the Members' servants.

Notice to Institutions.—We wish to call the attention of the Secretaries of the Institutions in Union, that the schedules relative to lectures are required to be sent in by the 13th instant. It should be noticed, also, that whether lectures are or are not required, the schedules should still be returned.

Petitions.—In answer to numerous inquiries as to the best time for presenting petitions to Parliament respecting the distribution of Parliamentary Reports, we have to state that any time during the next ten months will do.

QUESTIONS FROM CORRESPONDENTS.

Fishing Nets.—Can any of your correspondents inform me whether the American loom, for weaving fishing nets, brought to Liverpool in 1850, has been set up, and is at present being worked? I believe it was the intention of the inventor to substitute cotton for the ordinary hempen twine, and I shall be glad to hear if such has been done economically? (No. 5.)

Gas.—What is the cause of the superiority (supposing such to be the case) of the Edinburgh gas over the ordinary London gas of commerce? (No. 6.)

Borax.—Is there any substitute for borax, which is capable of being applied to the manufacture of pottery and earthenware, with commercial advantage? (No. 7.)

Coating for Ships.—What is the best kind of protection for ships' bottoms, so as to prevent the accumulation of barnacles and weeds? (No. 8.)

Fluoric Acid.—Can you inform me whether any improvements have yet been made in the materials used for engraving on glass, so as to be less injurious to the health of the workman than fluoric acid? (No. 9.)

Stained Glass.—Have any attempts been made to do away with the necessity for joining pieces of differently coloured glass in the production of stained glass windows, either by making the fluid metal take up a coloured impression in the casting, or by one being impressed on it when in a semi-fluid state? (No. 10.)

Gutta Percha.—Do you know of any series of philosophical experiments in connection with gutta percha, and its durability when buried in the earth or water? (No. 11.)

Carpets.—Has any process yet been patented for enabling pile fabrics to absorb colour from the surface downwards, when in an horizontal position? (No 12.)

ANSWERS TO CORRESPONDENTS.

Copper Types (2).—" Your correspondent (No. 2) asks the reason why copper types, which, according to his opinion, present so many advantages in durability and chances of delivery over the usual types, have not been generally adopted? There are many reasons:—1. Their greater expense. 2. Their not agreeing with the types now in use, which are cast in series; and probably copper is not a material which would work with them. 3. The very important fact that copper, on account of its great value, offers a great inducement to dishonesty, not only from numerous persons having access to printing-offices, but from burglars. A clever thief might abstract hundredweights of type from a large office without its being missed. The present type in a manner protects itself, the metal being useless except for recasting into type, and unsaleable to marine-store dealers. I am inclined to think, too, that as type is frequently exposed to wet, the oxidation of copper would be very injurious to the hands of the compositors; and am doubtful if copper would not be found too sharp for the rollers and the wet paper."—D.F.

" *W. P. B., Wenlock.*"—No arrangements are yet completed respecting the supply of books; the matter, however, is not forgotten.

"*J. A., Gainsboro'.*"—The size fixed on for the Journal is that which was judged most convenient for many reasons; your remarks are very true, but a larger size would also have been objectionable, and for even more weighty reasons.

"*G. R., Redditch.*"—As soon as all the necessary forms required by the authorities at Somerset-house have been gone through, it is hoped that stamped copies of the Journal will be issued.

MISCELLANEA.

Beacon Buoy.—The refuge Buoy Beacon, for shoals, &c., erected off Calshot Spit, about sixteen months ago, at the cost of Captain Peacock, R.N., having been found to answer its intended purpose, has since been purchased by the Harbour Commission. The Russian Government have lately ordered a similar buoy, which it is understood is to be fixed at Riga.

Society of Arts Exhibitions.—Some misapprehension appears to be current as to the nature of the Society's Exhibitions, and the conditions upon which articles are accepted. The Council desire to make known the fact, that no charge is ever made in respect to space, or for the privilege of exhibiting; all that is required being that exhibitors should deliver at, and remove from, the Society's House all the articles carriage free.

The New Crystal Palace.—A deputation from the Crystal Palace Company, consisting of Mr. Laing, M.P., chairman, Mr. Geach, M.P., Mr. Anderson, Mr. Farquhar, Mr. Fuller, Mr. Leech (solicitor), and Mr. Grove (secretary), had an interview with the Earl of Derby on Thursday, at his official residence in Downing-street. The decision of the Government on the application of the Directors of the Crystal Palace Company for a Charter has now been given. This decision had been postponed until the opinion of the law-officers of the Crown had been ascertained as to the bearing of an old Act of George III.—prohibiting the opening of disorderly places, under the pretence of discussing religious and political questions, on Sundays—on the case of the Crystal Palace. This opinion has been given to the effect that the wording of the statute in question renders it illegal to open any portion of the Crystal Palace or park on Sundays, and, consequently, the Charter has been given with a clause providing that no such opening shall take place unless the Legislature shall think fit to sanction it. It appears from a plan of the building, recently prepared, that the nave and the three transepts are to be laid out as ornamental gardens, relieved by Egyptian obelisks, Greek columns, fountains, &c. The northern side-aisles are to be devoted to architectural courts, to be called the Nineveh, Egyptian, Greek, Roman, Byzantine, Mediæval, Elizabethan, French, Flemish, Italian, and Revised Classical Courts. The southern side-aisles are also to be divided into courts, for the display of mineral manufactures, hardware, furniture, stationery and fancy goods, printed fabrics, flax and hemp, woollen and worsted, and silks, shawls, and lace. In the galleries are to be exhibited: raw produce—articles used as food, musical instruments, precious metals, &c., and they will be so arranged as to afford views into the courts below.

Country Lectures.—A Lecture actually consists of little more than reading a manuscript, and illustrating it in its course; and by the assistance of a reporter, who, in addition to the matter of the text, should describe in marginal notes the experiments performed, with a sketch of the apparatus used, and of the specimens exhibited. I can see very little difficulty of such lecture being repeated in Edinburgh, even by a moderately qualified man. It is merely a matter of pounds, shillings, and pence, which, with an extensive demand, would become a very limited affair. Suppose our Professors were each to reduce their lectures to such a practical form as is referred to above, and have them published, we think there are few towns where some one would not be found, gratuitously, or for a trifling remuneration, competent to rehearse and illustrate such lectures, which, I think, would be eagerly sought after and supported. If a list were subjoined to each course, of all the apparatus, specimens, charts, and materials of illustration required, there would be no difficulty in finding parties willing to supply the whole, of suitable characters, and at fixed prices. A course of one subject might be had at a time.—*Pharmaceutical Journal.*

Direct Positive Photographs upon Glass.—M. Adolph Martin, in a communication to the Paris Academy of Sciences, remarks, that collodion sun pictures, notwithstanding the care of producing them, and the delicacy of their execution, are nevertheless deficient in harmony. With the view of remedying this defect, M. Martin has devised the following plan of operation, which he states to have been most satisfactory. "The collodion which I employ," says he, "is composed of an etherial solution of gun-cotton, obtained by treating 2 grammes of cotton with a mixture of 50 grammes of nitrate of potash, and 100 grammes of sulphuric acid. The cotton, when thus prepared, when well washed and dried, is entirely soluble in a mixture of 10 volumes of ether, and 1 volume of alcohol, which constitutes the solution, to which about 1 gramme of nitrate of silver, transformed to iodide is now added, having been previously dissolved in 20 grammes of alcohol, by means of an alkaline iodide—iodide of ammonium being used by preference. The plate of glass, covered in the usual way with a thin layer of this substance, is plunged before it becomes dry into a bath, composed of one part distilled water, 1-12th of nitrate of silver, and 1-20th of nitric acid. Afterwards it is plunged into another bath of sulphate of protoxide of iron, and finally washed with care. Up to this moment, the image has remained negative, but on plunging it into a bath composed of the double cyanide of silver and potassium, it immediately becomes positive. All that now remains is to wash it, cover it with dextrine, dry, and finally mount it. The cyanuret bath which I employ, is similar to that used by Mr. Elkington. It is composed of 1 litre of water, 25 grammes of cyanuret of potassium, and 4 grammes of nitrate of silver. I have now only to remark that this process has always yielded me proofs, and which proofs are invariably positive. Their perfection entirely depends on the amount of manipulative care brought to bear in their development."

Mr. Henry Elkington.—It is with much regret that we hear of the death of Mr. Henry Elkington, so well-known by his Electrotyped art manufactures exhibited at the Great Exhibition. Owing to declining health, he had for some time previous to his death retired from business. We are glad to hear that the firm do not intend to let the artistic efforts made by their late partner die with him—but fully to carry out his views in a commercial spirit.

☞ *Below is given the first batch of Patents, sealed under the New Law. It is understood that there are somewhere about two hundred stopped, pending the decision of the Board of Trade and the Law Officers of the Crown, with reference to their extension to the Colonies.*

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS AND PROTECTION ALLOWED.

From Gazette, 3rd Dec., 1852.

Dated 17th Nov.

772. J. L. Bell—Treatment of compounds of iron and sulphur.
774. J. Hinchcliff and R. Salt—Steam-engines.
776. F. Bresson—Propelling by land and water.
778. H. V. Physick—Electric telegraph.

Dated 19th Nov.

779. J. Rock—Buffers.
780. J. Potter—Spinning machinery.
781. J. Hume—Water-closets.
782. J. V. Vernon and J. Edge—Machinery for engraving rollers.
783. G. Hamilton—Spreading starch, gum, &c.
785. P. Carmichael—Machinery for winding yarn.
786. J. Burgess—Dyeing wool.
787. M. Poole—Manufacture of seamless garments.
788. W. Williams—Electric Telegraphs.
789. G. P. Tewksbury—Life-preserving seat.
790. B. Nickels—Adhesive plaster.
791. R. K. Day—Fuel for lighting fires.
792. C. De Bergue—Permanent way.
793. J. R. Johnson—Manufacture of type, &c.
794. M. Poole—Cementing matters for ornament, &c.
795. H. Bessemer—Concentrating cane-juice, &c.
796. H. Bessemer—Crystallization of sugar.
797. H. Bessemer—Treatment of washed sugar.
798. J. J. J. Pierrard—Preparing wool, &c.
799. H. Bessemer—Concentrating saccharine fluids.

Dated 20th Nov.

800. R. Taylor—Dye and soap cisterns.
801. J. Trestrail—Raising sunken vessels, &c.
802. J. Brettell Collins—Flooring cramp or lifting jack.
803. J. Nasmyth—Packing cotton, &c.
804. T. Ellis—Metallic band for raising, &c., heavy weights.
805. J. Edwards—Improved envelope.
806. W. Dray—Machinery for crushing, bruising, &c.
807. C. Goty—Pumps.
808. G. Wilson—Glass bottles and jars.
809. W. Green—Textile fabrics and machinery, and printing and embossing.

Dated 22nd Nov.

810. E. Bates—Life-boats.
811. B. Walker and W. Bestwick—Braid and machinery.
812. W. Crosskill—Clod-crushers, &c.
813. J. Weems—Motive power.
814. R. Heggie—Railway breaks.
815. J. W. Lea and W. Hunt—Manufacture of iron.
816. W. E. Newton—Manufacture of paper.
817. J. Pepper—Machine for knitting ribbed work.
818. W. Hedges—Carriages.
819. J. Roose—Welded iron tubes.
820. S. Hunter—Anchors.
821. J. Blain—System of corking.

Dated 23rd Nov.

822. G. Eade—Breakwater.
824. J. Winter—Combining bars of iron for axles, shafts, columns, &c.
825. J. Winter—Wheels.
826. F. B. Frith—Machinery for dressing velvets, cords, &c.
827. J. Kilner—Insulating telegraph wires.
828. M. L. Parnell—Box staples and striking plates.
829. J. E. Grisdale—Steering ships.
830. J. Armytage and C. Thaxter—Dies for plastic materials.
831. W. E. Newton—Breaks for railway carriages.
832. J. Beale—Steam-engines and packing.
833. J. Frearson—Hooks for garments.
834. C. Watt—Electricity.
835. J. Barker—Separating gold from quartz.

WITH DEPOSIT OF COMPLETE SPECIFICATION.

857. J. Gedge—Looms for weaving.
876. J. H. Salvan—Paletots by felting, &c.
892. D. Woodall—Canal boats.
910. J. Burse and P. Gage—Manufacture of soda-water.
922. E. Brae—Apparatus for stopping and releasing ropes, &c.

From Gazette, 7th Dec.

NO APPLICATIONS.

WEEKLY LIST OF PATENTS SEALED.

51. Thomas Craddock, Ranelagh-works, Thames-bank.—Certain improvements in the steam-engine and steam-boiler.
70. Robert Lakin, Ardwick, Lancaster, and William Henry Rhodes, of Gorton, Lancaster.—Certain improvements in machines for spinning and doubling cotton, and other fibrous substances.
88. George Holcroft, Manchester.—Certain improvements in steam-engines.
96. Henry Bridson, Bolton-le-Moors, Lancaster.—Certain improvements in machinery to facilitate the rinsing, washing, and cleansing of fabrics, which machinery is also applicable to certain operations in bleaching and dyeing.
117. John Wilson Feil, Glasgow.—Certain improvements in preparing and spinning hemp and other fibrous materials for the purpose of making ropes, twines, and other similar articles.
151. David Wilkinson Sharp, Bingley, Yorkshire.—Certain improvements in machinery for combing and drawing a sliver of wool, flax, silk-waste, and other fibrous substances, and in apparatus for constructing screws to be used in such machinery.
187. Alexander Miller, Glasgow.—Certain improvements in the treatment or finish of textile fabrics and materials,
188. John Weems, Johnstone, N. B.—Certain improvements in obtaining and applying motive-power.
190. James Anderson Young, 185, Buchanan-street, Glasgow.—Certain improvements in dental operations, and in apparatus or instruments to be used therein.
214. Thomas Kennedy, Kilmarnock, N.B.—Certain improvements in obtaining and applying motive-power, applicable to time-keepers and clock-work, and for measuring and registering the flow of water and other fluids, and æriform bodies.
215. John Erskine, Greenock, N.B.—Certain improvements in the manufacture of felted and cemented fabrics.
255. John Crook, and John Wilkinson Wood, of Manchester.—Certain improvements in the method of preserving hoop-iron from oxydation or decay.
279. James Clark, Chapel-house, Paisley, N.B.—Certain improvements in weaving carpets and other fabrics, and in the machinery or apparatus employed therein.
294. Mitchell Thomson, Plymouth.—Certain improvements in lamps and in the production of artificial light.
304. John Patterson, Wood-street.—Certain improvements in buckles or fastenings.
314. Richard Husband, Manchester.—Certain improvements in weaving hat-plush, and other textile fabrics.
325. John Henry Johnson, 47, Lincoln's-inn Fields.—Certain improvements in composing and distributing type.
331. David Laidlaw, Glasgow.—Certain improvements in the manufacture of gas-burners.
364. Matthew Smith, Over Darwen, Lancaster.—Certain improvements in machinery for weaving and printing.
367. Peter Armande Le Comte de Fontainemoreau, 4, South-street, Finsbury.—Certain chemical combinations for the silicatisation of calcareous matters.
369. Thomas Suttie, Greenock, N. B.—Certain improvements in roasting apparatus.
428. John Campbell, Bowfield, Renfrew, N. B.—Certain improvements in the treatment or finishing of textile fabrics and materials.

WEEKLY LIST OF ARTICLES OF UTILITY REGISTERED.—NONE.